ALAMEDA COUNTY
CONGESTION MANAGEMENT AGENCY

1333 BROADWAY, SUITE 220 • OAKLAND, CA 94612 • PHONE: (510) 836-2560 • FAX: (510) 836-2185
E-MAIL: mail@accma.ca.gov • WEB SITE: accma.ca.gov

SUNOL SMART CARPOOL LANE JOINT POWERS AUTHORITY GOVERNING BOARD

MEETING NOTICE (NOTE MEETING TIME AND LOCATION)

Monday, April 10, 2006
11:15 AM or immediately following the Plans and Programs Committee meeting, whichever is later
Alameda County CMA Offices
1333 Broadway, Suite 220
Oakland, CA 94612

Members
Mayor Bob Wasserman, ACTIA, Chair JPA
Supervisor Scott Haggerty, ACTIA, Vice Chair JPA
Mayor Janet Lockhart, ACCMA
Mayor Jennifer Hosterman, ACCMA
Vice Chair Dean Chu, VTA

Agenda #

1. INTRODUCTIONS

2. PUBLIC COMMENT
Members of the public may address the Committee during "Public Comment" on any item not on the agenda. Public comment on an agenda item will be heard when that item is before the Committee. Anyone wishing to comment should make their desire known to the Chair.

3.0 CONSENT CALENDAR **ACTION**

3.1 MINUTES OF JANUARY 9, 2006*
The Board is requested to approve the attached Minutes of January 9, 2006.

3.2 JOINT POWERS AGREEMENT STATUS REPORT*
The Joint Powers Agreement has been fully executed and the attached requisite form has been sent to the Secretary of State.

3.3 PROJECT SCHEDULE*
The schedule is attached for your review. The team will review the schedule and highlight any changes and actions that may delay delivery of the project.

3.4 PROJECT DESIGN: STATUS REPORT
The final Project Study Report/Project Report and Fact Sheet (request for certain design exceptions) have been signed by Caltrans. The final Operations Study has also been submitted. Work on the 35% design has begun.

4. ADMINISTRATIVE CODE* ACTION

The Joint Powers Authority is requested to review and approve Ordinance #2006-01 Administrative Code, as attached. The purpose of the document is to state the powers and duties of the Governing Board, the composition of the JPA; set forth the rules of the proceedings of the Authority; prescribe the method for appointing employees; identify the methods, procedures and systems of operation and management of the Authority and identify other procedures and functions. CMA counsel will be available to answer questions.

5. PUBLIC EDUATION AND MARKETING SERVICES* ACTION

A public outreach meeting for the I-680 Smart Carpool Lane was held in October 2005. The meeting had extensive coverage from both newspapers and television. A project website was launched to provide information about the project as well as to provide an opportunity for public input. The summary of the meeting included recommendations for continued public education and marketing of the Smart Lane. Staff is seeking consultant services based on these recommendations. The services will be funded by FHWA's Value Pilot Pricing Program grant and Measure B for the 20% match requirement. The estimated cost for the services is $400,000 covering a three year period. The Board is requested to approve the scope of work and budget not to exceed $400,000. Consultants will contract with the Alameda County CMA.

6. PROJECT COST ESTIMATES AND FUNDING PLAN* DISCUSSION/ACTION

The JPA is requested to: 1) accept the project cost estimates; 2) approve the funding plan for the Smart Carpool Lane; and 3) support a request for federal earmarks to backfill the planned Value Pricing Pilot Program grants. Caltrans and the CMA have updated the costs for the underlying HOV project and the elements to convert the HOV lane to the Smart Lane as shown in Attachment 1. The costs estimates for both the HOV lane and Smart Lane have increased. The primary causes of the increases are cost of materials increases, incorporation of escalation, and the segregation of costs between the underlying HOV lane and the Smart Lane components. The funding plan identifies the amount and source of funds. The project schedule will be discussed in the next agenda item. However, in order to meet the schedule three critical funding actions need to occur: A) the CTC must approve the TCRP application transferring some of the funding from the northbound HOV lane to the southbound HOV lane; B) the ITIP funds need to be maintained in 07/08 and C) additional federal funding for the Smart Lane needs to be secured.

7. REVENUE ESTIMATES FOR 4-YEAR PILOT PROJECT DISCUSSION/ACTION

The Joint Powers Authority specifies that the Authority Governing Board has the responsibility to set the rate structure for the Smart Carpool Lane. It is recommended that the rate structure be based on the following assumptions: hours of operation are 24/7; there are minimum and maximum tolls; and travel time savings are based on monitoring the mixed flow lanes and the Smart Lane. Based on these assumptions, the range of revenues as shown in the attached memo indicate that there will be sufficient revenues to cover operations, maintenance, transit and other transportation improvements in the corridor.

8. ENFORCEMENT PLAN* DISCUSSION/ACTION

The attached Enforcement Plan identifies the strategy for enforcing the Smart Carpool Lane. The California Highway Patrol and Management Steering Committee have reviewed and approved

the draft document. The Enforcement Plan is one of the elements of the Systems Engineering Management Plan required by FHWA. The system requirements identified in the plan will guide the roadway and software design of the electronic toll collection system. The Board is requested to review and approve the approach to Smart Lane enforcement.

9. OTHER BUSINESS

10. ADJOURNMENT NEXT MEETING: TBD

* Materials enclosed
** Materials will be available at the meeting
# All items on the agenda are subject to action and/or change by the JPA Board.

SUNOL SMART CARPOOL LANE
JOINT POWERS AUTHORITY
GOVERNING BOARD

Minutes of Monday, January 9, 2006

1. Introductions

The meeting was convened by Mayor Wasserman @ 11:35. The roster of attendance is attached.

2. Public Comments

There were no public comments.

3. Minutes of September 1, 2005

A motion was made by Haggerty to approve the minutes of September 1, 2005; a second was made by Wasserman. The motion passed unanimously.

4. Joint Powers Agreement Status Report

Hart informed the committee that the three participating agencies approved the Joint Powers Agreement. As required by statute, the Secretary of State will be notified of information of the Authority within 30 days.

5. Election of Board Chair and Vice Chair

Hart informed the committee that since the Agreement has been approved, the Joint Powers Agreement requires that there be a Chair and a Vice Chair. A motion was made by Chu to elect Mayor Wasserman as Chair; a second was made by Haggerty. A motion was made by Hosterman to elect Haggerty as Vice Chair; a second was made by Wasserman. Both motions passed unanimously.

6. Regular Meeting Date and Location

Hart asked that the committee approve a regular meeting date and location. After a brief discussion the JPA will meet on the second Friday of the month at 9:30 a.m. in the City of Fremont offices.

7. Joint Powers Agreement: Required Documents

Since the approval of the Joint Powers Agreement the new Joint Powers Board is required by stature to approve a number of documents. The state will be notified within 30 days of the execution of the Joint Powers Agreement. In addition, the Administrative Code must be approved within 90 days from the approval by the last participating agency. A draft code will be presented for the Board's consideration in February 2006; other documents will require approval prior to the opening of the facility which will be brought to you in the future.

8. Project Status Report

Ramsey Hissen of USR provided an update on the progress of the project. The Project Study Report/Project Report (PSR/PR) will be submitted to Caltrans for review.

9. Other Business

There was no other business.

10. Adjournment

Mayor Wasserman adjourned the meeting. The next meeting to be determined.

Attest by:

_____

Victoria Winn

ALAMEDA COUNTY
CONGESTION MANAGEMENT AGENCY

1333 BROADWAY, SUITE 220 • OAKLAND, CA 94612 • PHONE: (510) 836-2560 • FAX: (510) 836-2185
E-MAIL: mail@accma.ca.gov • WEB SITE: accma.ca.gov

SUNOL SMART CARPOOL LANE
JOINT POWERS AUTHORITY GOVERNING BOARD
JANUARY 9, 2006
ROSTER OF MEETING ATTENDANCE
CMA OFFICES, OAKLAND, CALIFORNIA

	NAME	JURISDICTION/ ORGANIZATION	PHONE #	E-MAIL
1	Ramsey Hissen	URS	408-297-9585	ramsey_hissen@urscorp.com
2.	Jean Hart	ACCMA staff		
3.	Zad Wasserman	WRB+D	JTO 834-6600	
4.	Pamela Schock Mintzer	WRB+D	"	
5.	Emily Landin-Lowe	Caltrans	510 286-5124	emily_landin-lowe@dot.ca.gov
6.	Kunle Odumade	Fremont	510-494-4746	KOdumade@ci.fremont.ca.u
7.	SCOTT HAGGERTY	ALAMEDA COUNTY	510-272-6691	SCOTT.HAGGERTY@ACGOV.OR
8.	BOB WASSERMAN	FREMONT	284 YOU	
9.	DEAN J. CHU	VTA	408-981-6663	COUNCILDEANCHU@YAHOO.COM
10.	JIM LAWSON	VTA	408 321-5516	JIM.LAWSON@VTA.ORG
11.				
12.		Alm Co. Bds #1	510-272-6691	
13.	JOHN RISTOW		408 321-5713	JOHN.RISTOW@VTA.ORG
14.	ARTHUR DAO	ACTIA	5108933347	adao@acta2002.com
15.	Dennis Fay	ACCMA staff		
16.	Bill Gray	Gray-Bowen (ACCMA consultant)	(925)937-0980	
17.	Liz Fowler	Parsons Brinckerhoff	FowlerLa@pbworld.com	
18	Victoria Wing	ACCMA staff		
19.	ERIC CORDOBA	ACTIA PCT	925-671-5458	eric@cordobaconsulting.com
20.				
21.				
22.				
23.				

State of California
Secretary of State

FILE NO. _____

(Office Use Only)

NOTICE OF A JOINT POWERS AGREEMENT
(Government Code Section 6503.5 or 6503.7)

Instructions:

1. Complete and mail to: Secretary of State, P.O. Box 942877, Sacramento, CA 94277-0001 (916) 653-3984
2. Include filing fee of $1.00.
3. Do not include attachments, unless otherwise specified.

The name of the agency or entity created under the agreement and responsible for the administration of the agreement is: Sunol Smart Carpool Lane Joint Powers Authority

Mailing Address: 1333 Broadway, Suite 220, Oakland, CA 94612-1918

Provide a short title of the agreement if applicable: N/A

The public agencies party to the agreement are:

(1) Alameda County Congestion Management Agency

(2) Alameda County Transportation Improvement Authority

(3) Santa Clara Valley Transportation Authority

If more space is needed, continue on a separate sheet and attach it to this form.

The effective date of the agreement is: February 23, 2006

Provide a condensed statement of the agreement's purpose or the powers to be exercised:
To plan, design, construct, and administer the operation of a value pricing high-occupancy vehicle program on the Sunol grade segment of Interstate/State Highway Route 680 southbound from the interchange of State Route 84 near the City of Pleasanton and the unincorporated area of Sunol in Alameda County to State Route 237 (Calaveras Blvd) in the City of Milpitas, Santa Clara County.

March 3, 2006
Date

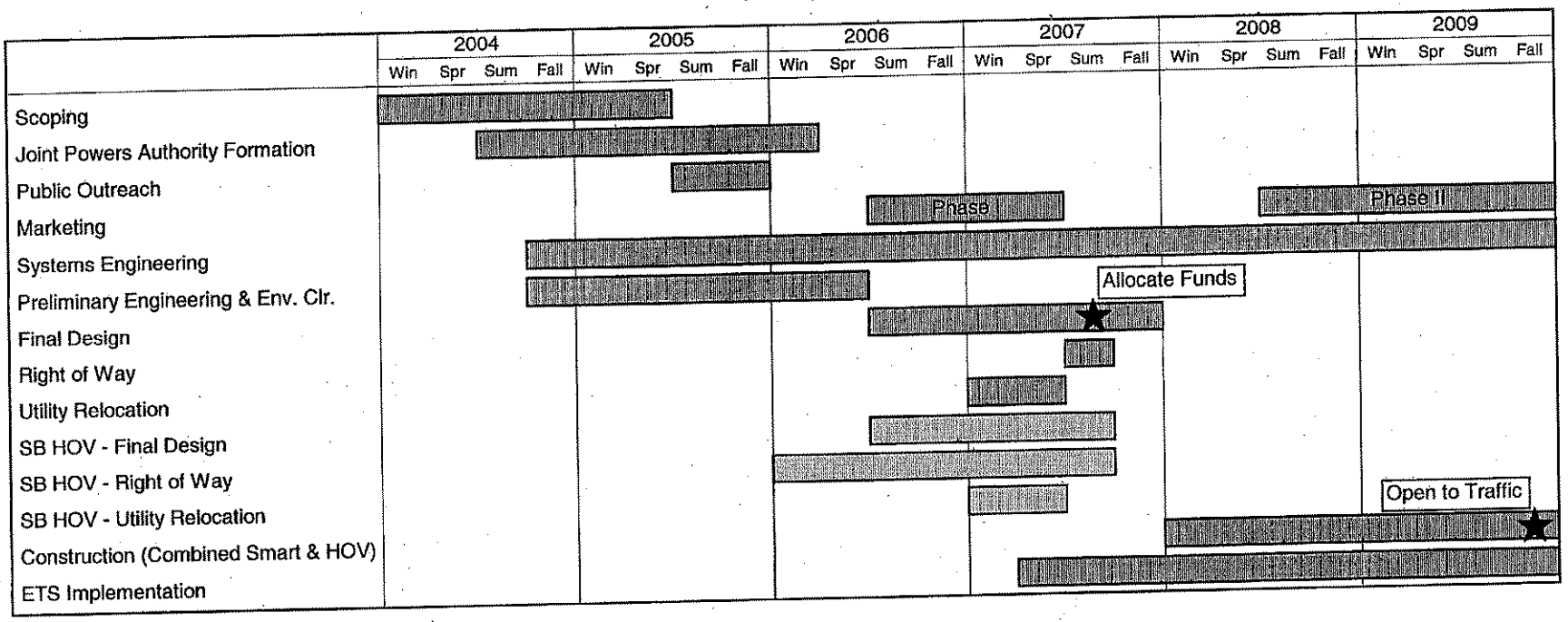
Signature
Pamela Schock Mintzer, General Counsel
Typed Name and Title

SEC/STATE NP/SF 404A (REV. 03/2005)

Southbound I-680 Smart Carpool Lane Project

Project Schedule

April 3, 2006



Based upon 3/23/06 CPM Project Schedule
Print Date: 3/23/2006

ALAMEDA COUNTY
CONGESTION MANAGEMENT AGENCY

1333 BROADWAY, SUITE 220 • OAKLAND, CA 94612 • PHONE: (510) 836-2560 • FAX: (510) 836-2185
E-MAIL: mail@accma.ca.gov • WEB SITE: accma.ca.gov

Memorandum

April 10, 2006
Agenda Item 4

Date: March 30, 2006

To: Sunol Smart Carpool Lane JPA

From: Jean Hart, Deputy Director

Subject: Administrative Code

Action Requested
The Joint Powers Authority is requested to review and approve Ordinance #1 Administrative Code, as attached. The purpose of the document is to state the powers and duties of the Governing Board, the composition of the JPA; set forth the rules of the proceedings of the Authority; prescribe the method for appointing employees; identify the methods, procedures and systems of operation and management of the Authority and identify other procedures and functions. CMA counsel will be available to answer questions.

Next Steps
The Administrative Code will serve as the first item in the development of a Policies and Procedures Manual.

Discussion
The attached Administrative Code prepared by CMA counsel outlines the basic administrative procedures for the Joint Powers Authority. The Administrative Code further details the provisions in the executed Joint Powers Agreement.

It has the following 9 sections:

1. Purpose
2. Powers, Authority and Duties of Board of the Authority
3. Rules for Proceedings
4. Managing Agency
5. Budget
6. Funds, Audit and Accounting
7. Meeting Compensation
8. Executive Director
9. Delegation of Authority

CMA counsel will be available to answer questions.

SUNOL SMART CARPOOL LANE JOINT POWERS AUTHORITY

ADMINISTRATIVE CODE

Ordinance No. 2006-01
Approved _____

The Sunol Smart Carpool Lane Joint Powers Authority (the "Authority") does enact its Administrative Code as follows:

1. Purpose.

The purpose of this code is: (1) to state the powers and duties of the Authority Governing Board, the composition of which is defined in Section 7.1 of the Sunol Smart Carpool Lane Joint Powers Authority Joint Powers Agreement dated February 23, 2006 (the "JPA"); (2) to prescribe the rules of proceedings of the Authority; (3) to prescribe the method of appointment of employees of the Authority; (4) to prescribe the methods, procedures, and systems of operation and management of the Authority; and (5) to prescribe other administrative procedures and functions.

2. Powers, Authority and Duties of Board of the Authority.

As set forth in the JPA, which is incorporated herein by reference, the Authority Governing Board has the power to prepare, adopt, revise, amend, administer and implement the provisions of the JPA and to accomplish other functions and responsibilities for the planning, design, construction, administration and operation of a value pricing high-occupancy vehicle program on the Sunol Grade segment of southbound I-680 in Alameda and Santa Clara Counties (the "Project"). The JPA authorizes the Authority Governing Board, in its own name, to perform all acts necessary for the exercise of these powers including but not limited to the following: to make and enter into contracts; to apply for and accept grants, advances and contributions; to employ or contract for the services of agents, employees, consultants and such other persons or firms as it deems necessary; to make plans and conduct studies and to review, recommend or adopt revisions or amendments to the JPA to the extent allowed by law; to acquire, construct, manage, maintain, operate and control any works or improvements necessary to perform its functions under the JPA; to acquire, hold or dispose of property necessary to perform its functions under the JPA; to sue and be sued in its own name; to incur debts, liabilities or obligations, subject to limitations set forth in the JPA; to levy and collect fees and charges, including administrative and operating costs, as provided in the JPA or by law, against all entities to which the law applies, both signatory and non-signatory to the Agreement; to adopt, as authorized by law, ordinances or resolutions necessary to carry out the purposes of the JPA; to seek state and federal funding to defray the cost of the design, construction, administration and operation of the Project; and to perform all other duties described in the JPA to the extent allowed by law.

3. Rules for Proceedings.

All proceedings of the Authority Governing Board shall be governed by Robert's Rules of Order, unless otherwise specifically provided in this Code.

3.1 Chairperson and Vice-Chairperson. The Authority Governing Board, annually at its January meeting, shall elect from the voting Board Members a Chairperson who shall preside at all meetings, and a Vice-Chairperson who shall preside in the absence of the Chairperson. In choosing the Chairperson and Vice-Chairperson, the voting Board Members shall give reasonable consideration to rotating these positions among the voting Board Members, among other factors. In the event of absence of the Chairperson and Vice-Chairperson or their inability to act, the voting Board Members present, by an order entered in the minutes, shall select one of their members to act as Chairperson Protempore, who, while so acting, shall have the authority of the Chairperson.

3.2 Regular Meetings. The Authority Governing Board shall hold at least one regular meeting each quarter. The date, hour and place at which each such regular meeting shall be held shall be fixed by the Authority Governing Board.

3.3 Special Meetings. Special meetings of the Authority Governing Board may be called in accordance with provisions of law.

3.4 Notice of Meetings. All meetings of the Authority Governing Board shall be held subject to the provisions of the Ralph M. Brown Act, being sections 54950 *et seq.* of the Government Code, and other applicable laws of the State of California requiring notice of meetings of public bodies to be given.

3.5 Minutes. The Authority Governing Board shall cause minutes of all meetings to be kept and shall cause a copy of the minutes to be forwarded to each member of the Governing Board.

3.6 Quorum. A majority of the voting Board Members of the Authority Governing Board shall constitute a quorum for the transaction of business, except that less than a quorum may adjourn from time to time.

3.7 Vote Required.

For the following actions, a majority of the vote of the Authority Governing Board shall be required:

(a) Prepare, adopt, revise, amend, administer and implement this Administrative Code.

(b) Prepare, adopt, revise, amend, administer and implement the annual Budget, which sets forth the annual expenses and revenues for Project administration, operations, maintenance and capital projects. The Budget shall consist of a capital budget and an operating budget.

(c) Prepare, adopt, revise, and amend an "Expenditure Plan," which shall allocate all net revenue generated by the Project that remains after payment of direct expenses pursuant to Section 10.2 of the JPA to transportation projects and/or programs within the Project Corridor pursuant to Section 10.3 of the JPA. The Expenditure Plan shall be adopted biennially and may be revised from time to time as may be needed by the Governing Board of the Authority.

(d) Establish, and revise from time to time, the fee structure for the use of the Sunol Smart Carpool Lane associated with the Project.

(e) Establish and revise the appropriate traffic flow guidelines for the Project Corridor to ensure optimal use of the express lanes by high-occupancy vehicles at level of service C, or level of service D with approval by the California Department of Transportation, and as otherwise provided in Section 149.5(b) of the Streets and Highways Code of the State of California.

(f) Approve, adopt, revise and amend required reports to the California State Legislature.

(g) Levy and collect fees and charges, including administrative and operating costs, as provided in the JPA or by law, against all entities to which the law applies, both signatory and non-signatory to the JPA.

For all other actions, provided there is a quorum pursuant to Section 3.6, a majority of the vote present and voting shall be required. For purposes of determining whether a majority of votes have been cast under this paragraph, only votes cast either in support or opposition to the matter shall be counted as "voting." Abstentions shall not be counted in determining the total number of votes cast for purposes of computing the majority.

3.8 Members. All powers of the Authority shall be exercised by a five member Governing Board. The Governing Board shall be composed of two representatives from the Alameda County Congestion Management Agency ("ACCMA"), two representatives from the Alameda County Transportation Improvement Authority ("ACTIA") and one representative from the Santa Clara Valley Transportation Authority ("VTA") (collectively "Member Agencies").

Members of the Governing Board shall be selected by the Boards of each respective Member Agency using the following criteria: ACCMA and ACTIA shall elect their Members of the Governing Board of the Authority from officials who represent jurisdictions within the Project Corridor, or jurisdictions that will benefit from the Project, but Members of the Governing Board need not be members of the governing boards of ACCMA or ACTIA; VTA shall elect its Member of the Governing Board of the Authority from members or alternate members of VTA's governing board. The California Department of Transportation may designate one person who shall be entitled to receive all notices sent to Members and to participate in all Board Meetings and discussions, but who shall not be entitled to vote or hold office.

Each Board Member shall hold office from the first meeting of the Authority after his or her appointment until a successor is appointed. Each Board Member shall serve at the pleasure of the appointing Member Agency.

3.9 Management Advisory Committee (SunolMAC). The SunolMAC is the management advisory committee to the Authority created for the purpose of identifying issues and advising on technical policies and implementation practices to the Authority and ACCMA (the Managing Agency) regarding the development and operation of the electronic toll system operations of the I-680 Sunol Smart Carpool Lane. The SunolMAC shall be composed of one staff representative from each of the following agencies: ACTIA, ACCMA, VTA, the California Department of Transportation, the California Highway Patrol, and the Bay Area Toll Authority. Upon recommendation by the Governing Board, representatives from other appropriate organizations or agencies may be invited to participate in SunolMAC meetings. A majority of the members of the SunolMAC shall constitute a quorum for the conduct of business. The Executive Director of the Authority or his/ her designee shall preside over the meetings of the SunolMAC.

3.10 Authority Governing Board Committees. The Authority Governing Board may establish committees from time to time as necessary for the design, construction, operation and administration of the Project. All members of the Authority Governing Board committees shall be voting members of the Authority Governing Board. The Authority Chairperson shall appoint the representatives to the committees. Appointments to the committees shall occur annually at the same time as the Chairperson and Vice-Chairperson are selected or when a vacancy occurs. All members of the Authority Governing Board shall be notified of the time and date of committee meetings. However, Board Members who are not members of a given committee may attend meetings of that committee as members of the public, must accordingly be seated with the public rather than at the table with the committee members, and may not vote or participate in committee discussions, other than as a member of the public. Each member of a committee shall carry one vote. The committees shall be advisory to the Authority Governing Board.

3.11 Representation on Outside Committees and Agencies. The Authority Governing Board may designate either Board Members or staff, as the Governing Board deems appropriate, to serve as the designated representative(s) of the board on any outside committees or agencies. Such representative(s) shall make a good faith effort to represent the position of the Authority Governing Board on any matter on which the Authority Governing Board has taken an official position or has otherwise taken formal action. In making such appointments, the Authority Governing Board shall make provision for the designation of alternates and of term of the appointment where appropriate.

4. Managing Agency.

Pursuant to Section 9 of the JPA, ACCMA is appointed as the Managing Agency for the Project on behalf of the Authority. The Managing Agency shall work in cooperation with the Member Agencies and endeavor to achieve consensus on Authority issues and matters that go before the Governing Board. If consensus cannot be reached, the Managing Agency shall prepare a report to the Governing Board that reflects the position of each Member Agency.

4.1 The Managing Agency shall have the following authority and responsibilities under the direction of the Governing Board:

(a) Prepare documents required for Governing Board approval, including:

(i) The Budget, a draft of which shall be submitted to the Governing Board at least three months prior to the first fiscal year of operation of the Project, and thereafter submitted annually by April 1, three months prior to the start of each new fiscal year;

(ii) Two-year Expenditure Plan, a draft of which shall be submitted to the Governing Board at least three months prior to the first fiscal year of operation of the Project, and thereafter submitted biennially by April 1 to the Governing Board;

(iii) Annual Audit pursuant to Section 6505 of the Government Code of the State of California;

(iv) Annual Report to the Governing Board and the Member Agencies;

(v) Project Report to the California State Legislature pursuant to Section 149.5(f) of the Streets and Highways Code of the State of California;

(b) Execute and administer agreements and contracts on behalf of the Authority for the construction, administration, operation and maintenance of the Project.

(c) File grant applications or submit requests for funding of the construction, administration and operation of the Project.

(d) Manage, implement and administer grants related to the Project.

(e) Prepare and submit to the Governing Board reports quarterly, or more frequently as requested by the Governing Board, comparing the actual expenses and revenues to the Budget.

(f) Report regularly to the staff of the Member Agencies and the Governing Board regarding issues that affect the Authority and the Project.

(g) Coordinate the development of the Governing Board agendas and staff reports with the staff of the Member Agencies prior to mailing.

(h) Provide information and support to Member Agencies for satisfying the requirements of local funding sources.

(i) Provide and manage all personnel utilized in providing or supporting the Project, and manage all contracts for professional services.

(j) Pay all invoices properly charged to the Authority, if within and in accordance with the adopted Budget.

(k) Assess Member Agencies for shortfalls in contributions, and credit Member Agency's surplus contributions to offset future Member Agency obligations as set forth in the Budget.

4.2 The Authority shall compensate the Managing Agency for its management services pursuant to the limitation of the Budget; however, the Member Agency serving as the Managing Agency shall not be entitled to compensation for its activities in representing that Member Agency on the Governing Board, except as set forth in Section 7.7(f) of the JPA.

5. Budget.

The Authority's annual budget is the central financial planning document that encompasses all revenue and expenditure decisions related to operations and to capital expenditures.

5.1 Budget Adoption. The Authority shall adopt an annual operating budget by April 1 each year, the first draft of which shall be submitted to the Governing Board at least three months prior to the first fiscal year of operation of the Project. The fiscal year is from July 1 to June 30. The Authority shall also adopt revisions to its capital budget by April 1. The Authority shall notify and provide a copy of the proposed budget to each Member Agency not less than thirty (30) days prior to the adoption of the budget.

5.2 Balanced Budgets. The operating and capital budgets shall be balanced budgets consisting of budgetary revenues and carryover of unused revenues from prior years.

5.3 Budget Control. The Executive Director shall maintain a budgetary control process to ensure compliance with the budgets. The operating budget shall be managed at the object level as defined in 5.4 and the capital budget shall be managed at the project level.

5.4 Line Item Expenditures. The annual budget, once adopted by the Authority Governing Board, is considered the Authority's controlling financial plan for expenditure. Expenditures that exceed the total approved budget for the Authority are not permitted without Board approval. The Executive Director is authorized to approve expenditures in excess of budgeted line items within the three primary expenditure categories (personnel, consultants/ contractors and other operating costs) in any amount as long as the total budget within each of the three expenditure categories is not overspent.

5.5 Budget Revisions. The Governing Board of the Authority shall formally review the Authority's fiscal condition quarterly, and amend the budget if necessary.

5.6 Appropriations. Appropriations for the operating budget lapse at the end of the fiscal year. Appropriations for the capital grants budget carry over from year to year.

6. Funds, Audit and Accounting.

6.1 Treasurer. The functions of Treasurer shall be performed for the Authority under supervision of the Executive Director by a person or entity designated by the Executive Director and approved by the Authority Governing Board, pursuant to Sections 6505.5 and 6505.6 of the Government Code of the State of California. The Authority Governing Board, by a majority of the authorized vote, may direct the Treasurer regarding the manner of short-term investment of any Authority funds on a fully secured basis consistent with the practices of state and local agencies for short-term investment of public funds. The Treasurer shall invest Authority funds in accordance with the Authority Governing Board adopted Investment Policy. In accordance with section 6505.5 of the Government Code, the Treasurer shall verify and report in writing to the Authority and to the Member Agencies the amount of money the Treasurer holds for the Authority, the amount of receipts and the amount paid out since the last report to the Authority.

6.2 Auditor. The functions of Auditor shall be performed for the Authority under supervision of the Executive Director by a person or entity designated by the Executive Director and approved by the Authority Governing Board, pursuant to Sections 6505.5 and 6505.6 of the Government Code of the State of California. The Auditor shall cause on an annual basis an independent audit to be made by a certified public accountant, or public accountant, in compliance with Section 6505 of the Government Code of the State of California.

6.3 Accounting, Financial Reporting and Auditing. The Authority will establish and maintain the highest standard of accounting practices.

(a) A comprehensive accounting process shall be maintained to provide complete and timely financial information necessary to effectively operate the agency.

(b) The Authority shall follow the applicable financial reporting standards established by the Governmental Accounting Standards Board.

(c) An annual audit shall be performed by an independent certified public accountant in accordance with generally accepted auditing standards, State law (including sections 6505 and 26909 of the California Government Code) and grant provisions. The audit report shall be issued within 150 days after year end.

(d) To the extent possible, the Authority shall organize and assign work duties and responsibilities so that no single employee performs a complete accounting cycle. Established procedures shall require proper authorizations by designated persons for all significant actions taken.

(e) When more than one funding source is available to finance an expenditure, the Authority shall use the most restrictive revenue source first.

6.4 Contracts. After a contract has been signed and authorized by the Authority, the Executive Director may approve progress payments to the Contractor. Payments may be made only upon completion of an Authority staff review for compliance with contract provisions.

(a) The Authority Governing Board delegates to the Executive Director authority to execute professional service contracts in an amount not exceeding $50,000, if: (1) such contracts for services do not exceed the amount identified for the appropriate line item in the approved annual budget; and (2) proposals are solicited from qualified contractors and selection criteria includes, but is not limited to, merit, quality of proposal and cost.

(b) It is the policy of the Authority to encourage businesses to locate and remain in Alameda and Santa Clara Counties, to employ residents of Alameda and Santa Clara Counties, and to spend Authority funds for goods and services within these counties. To promote and facilitate full participation by qualified local business enterprises and to ensure that a fair proportion of the contracts or subcontracts and contracts for the provisions of goods and professional services for Authority be placed with these enterprises in proportion to the funding by the Member Agencies as set forth in Section 10.1 of the JPA, the Authority shall adopt a local business enterprise policy and a small business enterprise policy.

6.5 Purchases. Expenditures will be made in accordance with Section 5.4, Line Item Expenditures. The Executive Director may establish petty cash in an amount not to exceed $500.00. This fund may be used only for minor incidental or emergency purchases.

7. Meeting Compensation.

The members of the Authority Governing Board shall be reimbursed at the rate of $125.00 per meeting for attendance at Authority Governing Board meetings and committee meetings, including meetings of (i) the Authority Governing Board committees, (ii) other committees established by the Authority, and (iii) outside committees or agencies. For purposes of (ii) and (iii) above, only those Board Members attending such meetings as Authority Governing Board-appointed representatives of the Authority shall be eligible for reimbursement upon presentation of proof of meeting attendance. Such compensation shall cover mileage and other costs associated with meeting attendance. Proper functioning of the Authority requires full participation by Board Members.

8. Executive Director.

The Executive Director of the Managing Agency, or another management employee of the Managing Agency designated by the Executive Director of the Managing Agency, shall be the Executive Director of the Authority.

9. Delegation of Authority.

The Governing Board delegates to the Managing Agency and the Executive Director all matters necessary for the day-to-day management of the Authority, except matters specifically reserved for the Board. The Executive Director shall, on behalf of the Authority, be responsible for instituting those methods, procedures and systems of operations and management which, in his/ her discretion, shall best accomplish the mission and goals of the agency.

9.1 Matters Reserved for the Board. The matters not delegated to the Managing Agency or the Executive Director but rather specifically reserved for the Board include agency strategy and policies, and succession planning for the Executive Director.

9.2 Delegation Limits. The Board shall periodically inform the Executive Director in writing the dollar limits of certain types of transactions delegated to him/her. Types of transactions shall include authorization of purchases, disbursements, contracts, change orders, legal settlements, hiring and terminating employees, establishing project and operating budgets, and budget transfers.

9.3 Sub-delegation. The Executive Director may sub-delegate authority to Managing Agency employees and consultants where appropriate.

9.4 Reporting. The Executive Director shall report regularly to the Board concerning the authority exercised and matters which come within, or may come within, the scope of the matters reserved for the Board. The reports cover a range of matters, including sub-delegations, litigation activity, financial performance, investment risk, and risk management.

Approved as to form:

_____
Counsel

Approved this ____ day of _____ 200__:

_____
_____, Chairperson

Attest:

_____
_____, Board Secretary

ALAMEDA COUNTY
CONGESTION MANAGEMENT AGENCY

1333 BROADWAY, SUITE 220 • OAKLAND, CA 94612 • PHONE: (510) 836-2560 • FAX: (510) 836-2185
E-MAIL: mail@accma.ca.gov • WEB SITE: accma.ca.gov

April 10, 2006
Agenda Item 5

Memorandum

Date: March 28, 2006

To: Sunol Smart Carpool Lane JPA

From: Jean Hart, Deputy Director

Subject: I-680 Smart Carpool Lane: Public Education and Marketing

Action Requested
A public outreach meeting for the I-680 Smart Carpool Lane was held in October 2005. The meeting had extensive coverage from both newspapers and television. A project website was launched to provide information about the project as well as to provide an opportunity for public input. The summary of the meeting and recommendations for public education and marketing of the facility were presented to the JPA in November. The JPA Board is requested to authorize staff to prepare a scope of work and issue a Request for Proposals based on these recommendations. The proposed budget for the services is $400,000 over three years. The services will be funded by FHWA's Value Pilot Pricing Program grant (80%) and Measure B (20%).

Next Steps
An Request for Proposal will be issued in May and consultant selected in June. It is expected that the consultant(s) will begin work in July.

Discussion
A public meeting on the Smart Carpool Lane was held in Fremont last October. The meeting had extensive media coverage including newspaper articles, press releases, and television and radio spots. A website was launched providing a virtual open house. Although the attendance at the meeting was low, there were 18,000+ hits on the website.

A summary of the meeting and recommendations for marketing and education activities were presented to the Authority Board in November. The recommendations include the following:

- Conduct additional research to define the environment needs and concerns. Research will include focus groups, public opinion survey, stakeholder views

- Analyze strengths, weaknesses, opportunities and threats
- Develop branding for the Smart Carpool Lane
- Prepare a core set of presentation materials
- Form an advisory committee to solicit feedback on continuing design and operations of the facility
- Conduct additional public meetings as appropriate and other methods of communication with interested parties
- Update and maintain website
- Focus on the media

Staff will develop a specific scope of work that will include these recommendations. Services under this contract would be for three years until the launch of the project scheduled for late 2009.

The budget level is consistent with the funds levels for the Minnesota Express Lane. The MnPass project costs for public outreach and marketing was $451,000 for consultant services and printing of materials.

Funds are available from the Value Pricing Pilot Program Grant from FHWA and Measure B. Federal funding will require a DBE goal. Representatives from FHWA, Caltrans, ACTIA and VTA will be invited to participate in selection of the consultant.

ALAMEDA COUNTY
CONGESTION MANAGEMENT AGENCY

1333 BROADWAY, SUITE 220 • OAKLAND, CA 94612 • PHONE: (510) 836-2560 • FAX: (510) 836-2185
E-MAIL: mail@accma.ca.gov • WEB SITE: accma.ca.gov

Memorandum

April 10, 2006
Agenda Item 6

Date: March 30, 2006

To: Sunol Smart Carpool Lane JPA

From: Jean Hart, Deputy Director

Subject: Project Costs and Funding

Action Requested
The JPA is requested to: 1) accept the project cost estimates; 2) approve the funding plan for the Smart Carpool Lane; and 3) support a request for federal earmarks to backfill the planned Value Pricing Pilot Program grants.

Caltrans and the CMA have updated the costs for the underlying HOV project and the elements to convert the HOV lane to the Smart Lane as shown in Attachment 1. The costs estimates for both the HOV lane and Smart Lane have increased. The primary causes of the increases are cost of materials increases, incorporation of escalation, and the segregation of costs between the underlying HOV lane and the Smart Lane components. The funding plan identifies the amount and source of funds. The project schedule will be discussed in the next agenda item. However, in order to meet the schedule three critical funding actions need to occur: 1) the CTC must approve the TCRP application transferring some of the funding from the northbound HOV lane to the southbound HOV lane; 2) the ITIP funds need to be moved from 08/09 to 07/08 and 3) additional federal funding for the Smart Lane needs to be secured.

Next Steps
Staff will continue to work with Caltrans to secure the amendment to TCRP to transfer funds from the northbound to the southbound HOV Lane.

Discussion
CMA staff and Caltrans have been working together to determine the appropriate sharing of costs between the HOV and Smart Lane. The costs for both projects have increased due to escalation, modification to the design that required additional pavement for the Smart Lane and increase in materials' costs. Any delay in the delivery of the project will likely result in an increase in the project cost due to continued escalation.

The funding plan indicates that both projects can be fully funded if three critical actions are approved: 1) transferring a majority of the TCRP funds from the northbound HOV lane to the southbound HOV lane; 2) moving the ITIP funds scheduled for 08/09 to 07/08 and 3) securing additional federal funds.

The CMA and VTA have committed $25 million in each of their respective long range transportation plans for a northbound I-680 project. ACTIA will have approximately $15 million available for a HOT Lane in the northbound direction. The State has a commitment for $33 million for the northbound project. Therefore, approximately $98 million will be available for a northbound HOV/High Occupancy Toll Lane in the corridor although it will not be for the entire 14-mile corridor. Caltrans has submitted an application for a TCRP amendment.

CMA staff has indication that Caltrans has been successful in getting the ITIP funds moved to 07/08, more information will be provided at the meeting

Staff is also seeking federal funds for a portion of the project. The CMA has been successful in securing about $3.65 million in grants and earmark. Unfortunately, FHWA has determined that HOV to HOT conversions will no longer be available for grants. Therefore, all federal funds will likely come from earmarks. The JPA is requested to support appropriations earmarks for the project. Should we be unsuccessful in securing earmarks, then staff will pursue other alternatives.

Southbound I-680 HOV and Smart Lane

Funding Plan

(based upon November 2005 estimates)

Estimated Costs	Combined Cost	HOV Share	Smart Share
Total Escalated Construction Capital Costs	$ 96,000,000	$ 78,000,000	$ 18,000,000
Total Escalated Support Costs	$ 27,600,000	$ 19,900,000	$ 7,700,000
Total Escalated ETS Costs	$ 10,800,000	$ -	$ 10,800,000
Total Costs through Year 1 of Operation	$ 134,400,000	$ 97,900,000	$ 36,500,000

Proposed Funding

TCRP	$ 58,000,000	$ 58,000,000	
IIP	$ 25,270,000	$ 25,270,000	
RIP (Ala)	$ 7,246,000	$ 7,246,000	
RIP (SCl)	$ 8,308,000	$ 8,308,000	
Demo (Ala HOV)	$ 1,817,265	$ 1,817,265	
Demo (SCl HOV)	$ 1,638,087	$ 1,638,087	
Local Funds (Ala Demo match)	$ 870,000	$ 870,000	
ACTIA	$ 14,000,000		$ 14,000,000
RIP (SCl)	$ 7,300,000		$ 7,300,000
Federal Earmark	$ 2,000,000		$ 2,000,000
VPPP Grant #1	$ 714,000		$ 714,000
VPPP Grant #2	$ 950,000		$ 950,000
VPPP Grant #3	$ -		$ -
Future Federal	$ 6,336,000		$ 6,336,000
Local Funds (Ala)	$ 47,500		$ 47,500
Local Funds (SCl)	$ 53,000		$ 53,000
Planned Funds	$ 134,500,000	$ 103,100,000	$ 31,400,000
Balance by responsibility		$ 5,200,000	$ (5,100,000)
Balance on project	$ 100,000		

Assumptions

1. Smart Lane widening is the 4' buffer plus 2 feet of the inside shoulder widening for enforcement
2. The additional 2 feet of inside shoulder widening is part of HOV work
3. Smart Lane sign structures are Caltrans standard designs
4. Design exceptions for access points & narrow lanes will be approved
5. The Smart Lane will build two enforcement pull-outs in the southern end of the corridor
6. Maintenance vehicles will utilize the extra wide NB shoulder to access the Smart Lane equipment
7. The Smart Lane will co-locate controller cabinets with Caltrans TOS cabinets
8. Auxiliary lanes in the southern section are included as part of HOV project
9. The Environmental Costs for the SB HOV are not included
10. No Right of Way capital is attributed to the Smart Lane, just the cost to certify
11. Cost not yet incurred are escalated a 3%/yr

ALAMEDA COUNTY
CONGESTION MANAGEMENT AGENCY

1333 BROADWAY, SUITE 220 • OAKLAND, CA 94612 • PHONE: (510) 836-2560 • FAX: (510) 836-2185
E-MAIL: mail@accma.ca.gov • WEB SITE: accma.ca.gov

April 10, 2006
Agenda Item 7

Memorandum

Date: April 3, 2006

To: Sunol Smart Carpool Lane JPA

From: Jean Hart, Deputy Director

Subject: Revenue Estimates for Pilot Project: Rate Structure

Action Requested
The Joint Powers Authority specifies that the Authority Governing Board has the responsibility to set the rate structure for the Smart Carpool Lane. It is recommended that the rate structure be based on the following assumptions: hours of operation are 24/7; there are minimum and maximum tolls; and travel time savings are based on monitoring the mixed flow lanes and the Smart Lane. Based on these assumptions, the range of revenues as shown in the attached memo indicate that there will be sufficient revenues to cover operations, maintenance, transit and other transportation improvements in the corridor.

Next Steps
The approved assumptions will used to refine the range of revenue estimates and capital and operating costs. The assumptions will be used to develop the software for the electronic toll collection system.

Discussion
The Authority as the Policy Advisory Committee approved last September key assumptions for how the Smart Carpool Lane would operate. Two of the key assumptions are that the lane will be dynamically priced, i.e., the price will be determined by the level of congestion not a set fee and that the lane will operate 24 hours per day, 7 days per week. State legislation requires that Level of Service C be maintained in the Smart Carpool Lane. LOS D is permitted with approval of Caltrans. In addition, the Authority approved a minimum toll of $.50.

Earlier revenue estimates developed for the I-680 HOT Lane Feasibility Study were based on a twenty-year projection, the value of time and the assumption that only the Smart Lane would be monitored to determine the cost of a trip. This approach would be consistent with other existing HOT lanes in the United States.

However, in order to determine the true value of the trip, the price would have to be informed by the congestion (travel time) in the mixed flow lanes. If congestion in the mixed flow was high and travel time savings in the Smart Lane was high, then the price should reflect the value of time saved. Conversely, if there was little or no congestion, then the travel time savings would be nil and the cost of the Smart Lane would be low. The rate structure would be based on the level of congestion. Monitoring the mixed flow lanes would ensure that the price of the Smart Lane was neither too high nor too low. Therefore, it is recommended that all lanes be monitored. There are additional capital and operating costs with monitoring all of the lanes. Additional monitoring equipment is required and the annual operating cost will increase slightly. Both increases are accommodated in the capital and operating costs as discussed in Agenda Item 6.

The consultant was also requested to apply minimum and maximum tolls. The revenue projections shown in the attachment assumes a $1.00 minimum toll and a maximum toll of $12.00 for a one way trip the entire length of the corridor at the most congested period(s). The maximum toll level was set at the threshold where the required LOS C would not deteriorate to LOS D.

The consultant will be available to review the attached memo and the assumptions that were used to derive a range of revenue estimates. The projections indicate that there are sufficient revenues to cover operations and maintenance plus a surplus for transit and capital improvements that benefit the corridor.

ECONorthwest

ECONOMICS • FINANCE • PLANNING

Phone • (503) 222-6060
FAX • (503) 222-1504
info@eugene.econw.com

Pioneer Tower • Suite 1460
888 SW Fifth Avenue
Portland, Oregon 972024-2028

Other Offices
Eugene • (541) 687-0051
Seattle • (206) 622-2403

Friday, March 31, 2006

TO: **Jean Hart**
CC: **Ramsey Hissen**
FROM: **Tom Light, Randy Pozdena**
SUBJECT: **I-680 REVENUE AND TOLL PROJECTIONS**

The estimates of tolls, revenues, and traffic conditions which are presented in the attached tables have been obtained by implementing ECONorthwest's Toll Optimization Model (TOM©)—a special model designed to determine equilibrium lane volumes and travel times in the presence of HOT lane type tolling. For the I-680 HOT lane facility, tolls have been dynamically optimized for individual segment to generate maximum revenue and ensure that level of service requirements are met at all time. In some scenarios explored, the tolling approach has been additionally augmented to minimize the maximum toll charge, respecting a desired upper-bound limit on the number of vehicles using the lane. The analysis was conducted in a manner consistent with design criteria, including signage locations and access and egress points, proposed by Wilbur Smith.

The toll optimization process was "seeded" using detailed data on facility characteristics (i.e. volume delay relationships, number of lanes, etc.) and vehicle mixes during the AM peak period derived from MTC's regional travel demand model, as implemented by Parsons Brinckerhoff.[1] Loop detector data was also compiled and used to characterize variability in diurnal traffic patterns on I-680 under current conditions.[2] To account for future growth in traffic volumes, the diurnal data was adjusted using a peak-spreading relationship which is incorporated in ECONorthwest's TOM.

We have performed analyses that investigate the sensitivity of our estimates to alternative operating and economic assumptions. The assumptions explored in these analyses include:

- Static vs. dynamic pricing of the HOT lane;
- HOV 2+ vs. 3+ carpool policies;
- Alternative average daily travel assumptions (0.5% vs. 1.0% annual growth);

---

[1] The regional model runs which were utilized by ECONorthwest are presented in a technical memorandum from David Ory to Jean Hart entitled "*I-680 Southbound Extension Modeling*," dated 5/31/2005.

[2] The loop detector data used in this study was obtained from the PeMS Freeway Performance Measure System (http://pems.eecs.berkeley.edu/).

- Alternative future real income growth assumptions (0% vs. 1.0% vs. 1.8% annual growth);
- Varying maximum lane occupancy limits (1,450 vs. 1,550 vehicles/hour);
- Alternative minimum and maximum toll limits;
- Varying ability to monitor real-time facility vehicle volumes and optimally price the HOT lane.

The four cases presented in the attached tables incorporate assumptions that have been selected by the I-680 management committee for final evaluation.

Table 1: Summary of I-680 Revenue for Selected Cases

	Toll-Setting Objective	Assumed Match between Actual Tolls and Theoretical Tolls	Maximum Revenue Potential in 2010	Average AM Peak Toll to Travel Full Distance
Case A	Max Rev	Perfect	$6,764,350	$5.97
Case B	Max Rev, Minimize Max Toll	Perfect	$6,379,712	$5.09
Case C	Max Rev	Moderate	$5,238,299	$5.97*
Case D	Max Rev, Minimize Max Toll	Moderate	$4,940,436	$5.09*

Source: ECONorthwest from Toll Optimization Model©.

Notes:

1. All estimates in 2006 dollars. Estimates assume no real income growth, a HOV 2+ carpool policy, 1.0% annual ADT growth, and that the HOT lane is priced so that no more than 1,450 total vehicles/hour use the lane. Cases A, B, C, and D correspond to research cases 4/6A, 7A, 4A, and 8A respectively.
2. In previous analysis, a number of assumptions were identified which could cause actual revenues to be lower than forecast. They include (1) inaccurate characterization of speed-flow relationships used in the regional model, (2) inaccurate characterization of the value of time distribution, (3) variation in the volume projections produced by the regional model from actual future traffic patterns, (4) the adoption of pricing policies or objectives not considered here, (5) deviation in facility design parameters from those modeled (for instance, facility length is assumed to be 15.2 miles), (6) deviation from the assumed operating policy (for instance, the facility is assumed to be priced at all times), (7) uncertainty in transponder marketing penetration.
3. "*" indicates that toll levels may differ depending on how actual tolls vary from theoretical tolls.

Table 2: Summary of I-680 Revenue in First 4 Years of Operation

	Toll-Setting Objective	Assumed Match between Actual Tolls and Theoretical Tolls	Maximum Revenue Potential (millions of dollars)					
			2010	2011	2012	2013	Undiscounted Total	Discounted Total (4% Real Discount Rate)
Case A	Max Rev	Perfect	$6.8	$7.1	$7.4	$7.7	$28.9	$23.2
Case B	Max Rev, Minimize Max Toll	Perfect	$6.4	$6.7	$6.9	$7.2	$27.2	$21.9
Case C	Max Rev	Moderate	$5.2	$5.5	$5.7	$5.9	$22.3	$18.0
Case D	Max Rev, Minimize Max Toll	Moderate	$4.9	$5.2	$5.4	$5.6	$21.1	$17.0

Source: ECONorthwest from Toll Optimization Model©.

Notes:

1. All estimates in 2006 dollars. Estimates assume no real income growth, a HOV 2+ carpool policy, 1.0% annual ADT growth, and that the HOT lane is priced so that no more than 1,450 total vehicles/hour use the lane. Cases A, B, C, and D correspond to research cases 4/6A, 7A, 4A, and 8A respectively.
2. In previous analysis, a number of assumptions were identified which could cause actual revenues to be lower than forecast. They include (1) inaccurate characterization of speed-flow relationships used in the regional model, (2) inaccurate characterization of the value of time distribution, (3) variation in the volume projections produced by the regional model from actual future traffic patterns, (4) the adoption of pricing policies or objectives not considered here, (5) deviation in facility design parameters from those modeled (for instance, facility length is assumed to be 15.2 miles), (6) deviation from the assumed operating policy (for instance, the facility is assumed to be priced at all times), (7) uncertainty in transponder marketing penetration.

Table 3: Average Tolls and Travel Times During 2-Hour AM Peak in 2010 for Various Trips

	Average Toll	Average Travel Time (minutes)		Travel Time Savings
		Mixed Flow Lanes	HOT Lane	
Case A and C				
Trip 1: South of Palamo Rd. to Mission Blvd. (Route 262)	$3.89	16.5	8.2	8.3
Trip 2: South of Palamo Rd. to Calaveras Blvd (Route 237)	$5.97	26.3	14.5	11.7
Trip 3: South of Palamo Rd. to Montague Expressway	$5.97	29.4	16.6	12.8
Trip 4: Automall Parkway to Mission Blvd (Route 262)	$0.74	4.6	3.0	1.6
Trip 5: Automall Parkway to Calaveras Blvd (Route 237)	$2.83	14.4	9.3	5.1
Trip 6: Automall Parkway to Montague Expressway	$2.83	17.6	11.4	6.2
Case B and D				
Trip 1: South of Palamo Rd. to Mission Blvd. (Route 262)	$3.88	16.5	8.2	8.3
Trip 2: South of Palamo Rd. to Calaveras Blvd (Route 237)	$5.09	25.5	15.2	10.3
Trip 3: South of Palamo Rd. to Montague Expressway	$5.09	28.4	17.4	11.0
Trip 4: Automall Parkway to Mission Blvd (Route 262)	$0.74	4.6	3.0	1.6
Trip 5: Automall Parkway to Calaveras Blvd (Route 237)	$1.95	13.7	10.0	3.6
Trip 6: Automall Parkway to Montague Expressway	$1.95	16.6	12.2	4.4

Source: ECONorthwest from Toll Optimization Model©.
Note: See tables 1 and 2 for description of cases, assumptions, and caveats.

Southbound I-680 Smart Carpool Lane Enforcement Plan

Submitted to:

Alameda County
Congestion Management
Agency

Submitted by the
Partnership Team of:

ENGINEERS
PLANNERS
ECONOMISTS

Wilbur Smith Associates

and

IBI GROUP

URS

March 2006

I-680 Smart Carpool Lane Enforcement Plan

Table of Contents

I-680 Smart Carpool Lane Enforcement

Enforcement Group
Proper enforcement of the I-680 Smart Carpool Lane program is essential to its success. Recognizing the importance of system enforcement, the Alameda County Congestion Management Agency (ACCMA) established a working group to analyze, establish and implement a system enforcement plan. This group is composed of representatives from ACCMA, the California Highway Patrol (CHP) and the consultants from the Smart Lane Program Team.

Current HOV Lane System
A High Occupancy Vehicle (HOV) lane, which is referred to as a carpool lane, has been established on I-680 running southbound from just south of the State Route (SR) 84 Interchange near Pleasanton to just south of Calaveras Boulevard (SR 237) in Milpitas.

The HOV lane is currently restricted to vehicles with two or more occupants, buses and motorcycles during the morning peak period. It is available to everyone the remainder of the day. Access to the HOV lane is not restricted (i.e. permitted vehicles can enter and exit the HOV lane continuously).

Current HOV Lane Enforcement
The enforcement goal with the current HOV lane system is to maintain free flowing lanes for HOVs during all restricted hours. Given the unlimited access to the carpool lanes, enforcing these lanes can prove to be challenging. CHP enforcement officers are limited to visual observation of violating vehicles. Video enforcement of the HOV lane is not currently used.

I-680 Smart Carpool Lane System
The I-680 Smart Carpool Lane System will allow Single Occupant Vehicles (SOV) to use the carpool lane by paying a toll. The carpool lane, therefore, will become a High Occupancy Toll (HOT) lane and it is anticipated that it will be restricted to carpools (vehicles with 2 or more people), buses, motorcycles and SOV operators that choose to pay a toll to utilize the additional capacity in the HOV lane. The I-680 Smart Lane will operate on a twenty-four hours a day, seven days per week basis. All HOVs, buses and motorcycles may continue to use the lane without charge and without having a transponder.

SOV drivers choosing to use the Smart Lane will need to be members of the FasTrak electronic toll collection (ETC) system, equip their vehicle with a transponder and have an account that is in good standing. The transponder will be placed either on the windshield or on the front license plate of their vehicle and radio frequency (RF) technology will be utilized to identify the vehicle's transponder as it travels in the Smart Lane through each of the tolling zones.

Toll rates for SOVs that choose to utilize the Smart Lane will be determined dynamically by using traffic density and speed information from the Smart Lane and travel time data

from the mixed-flow (MF) lanes. As the traffic density (TD) in the Smart Lane increases or decreases the rates will go up or down respectively. Even though the toll rates will dynamically change based upon the TD that is detected and continuously reported from the Smart Lane and travel time data that is collected from the MF lanes, minimum and maximum toll rates will also be instituted. The minimum rate will be $____ for each section and the maximum combined rate for both sections will be $_____.

The goal of the I-680 Smart Lane system is to allow SOVs to use the lane without reducing the current quality of trips in the HOV lane. The target TD will be to maintain traffic at level of service "C" or better, which will maintain vehicle speeds of approximately 50 miles per hour (MPH). Toll rates will be used to manage the number of SOVs that are allowed to utilize the Smart lane by adjusting the toll rates dynamically.

Smart Carpool Lane System Enforcement

In order to manage the traffic in the Smart Lane using dynamic pricing, careful and efficient system enforcement is essential. Uncontrolled use of the Smart Lane by unauthorized vehicles will cause overcrowding, disrupt the dynamic pricing process and jeopardize the success of the pilot project.

The I-680 enforcement process will always include some type of visual monitoring to determine how many occupants are in the vehicles that are traveling in the Smart Lane. Visual enforcement is performed by observing driver behavior entering and exiting the Smart Lane and determining if a transponder is visible on the windshield. Access to the lanes will be controlled through the use of double/double lines (soft barrier) where access is denied and a single dashed white line where access is allowed. Primary emphasis for enforcement will be reducing or attempting to eliminate the number of SOVs that use the Smart Lane without a valid transponder and minimizing occurrences of vehicles crossing the double white lines. However, it is presumed that all other typical traffic violations will also be enforced by the CHP in the southbound I-680 Smart Lane corridor, including speeding, seat belt violations, etc.

The I-680 Smart Lane that will need to be enforced is shown in Figures 1 and 2. Figure 1 shows the northern segment of the Smart Lane between Route 84 and Grimmer Boulevard and Figure 2 shows the southern segment of the lane that extends from Grimmer Boulevard to Route 237 in the south.

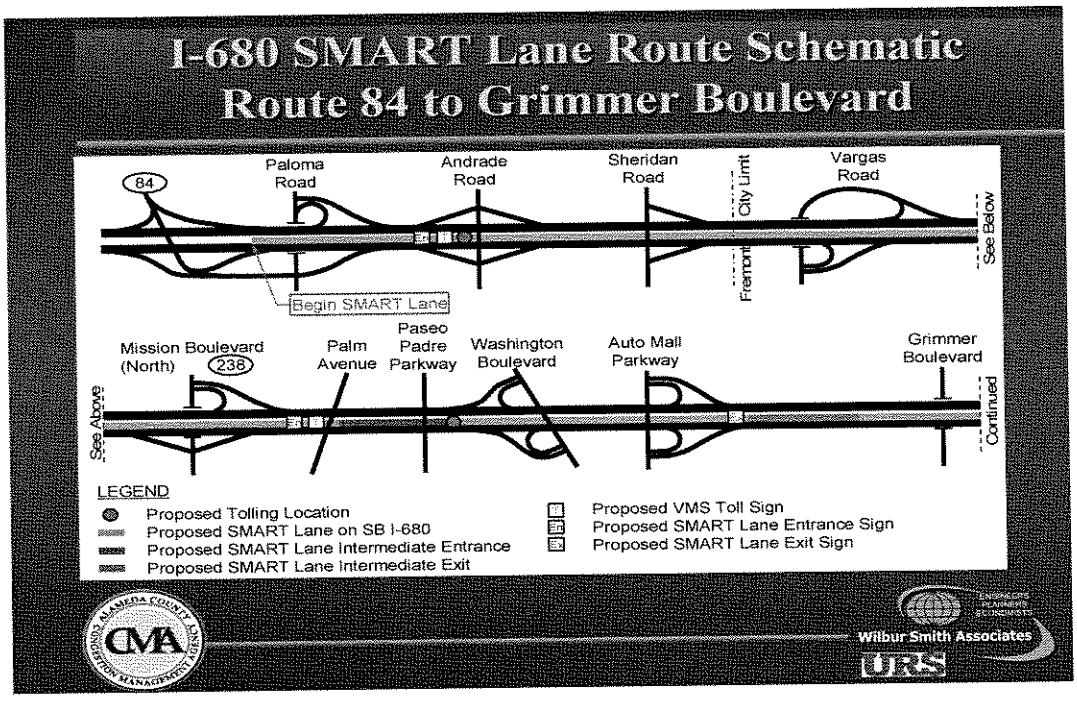


Figure 1 – I-680 Smart Lane Northern Segment

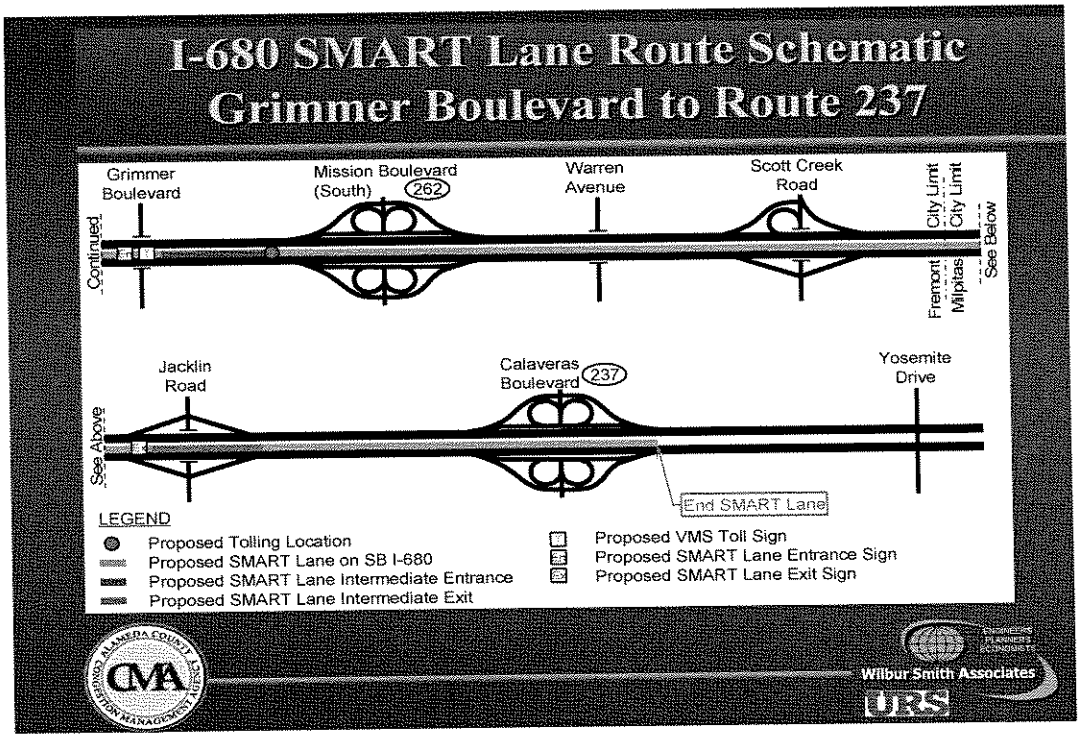


Figure 2 – I-680 Smart Lane Southern Segment

Smart Carpool Lane System Enforcement Tools

The CHP will provide enforcement and will make use of three important enforcement tools, which will be provided to them and be maintained by the Joint Powers Agency (JPA).

- Transponder Detection Beacons;
- Mobile Enforcement Readers (MERs); and
- Hand Held Enforcement Devices.

Transponder Detection Beacons - Enforcement beacons are flashing lights that would be located facing upstream at each tolling zone. The beacons will indicate that a vehicle passing through the tolling zone is equipped with a valid transponder which is installed properly on its windshield. If the light does not illuminate, a CHP officer, or any other observer located near the tolling zone area in a position where he/she is able to view the beacon, would then visually determine how many people are in the vehicle and pull the person over and issue the driver a citation if there is only one occupant onboard. Non-CHP officers would be encouraged to report violators to the Customer Service Center. Presented below as Figure 3 is a picture of a typical enforcement beacon that is mounted within the Smart Lane tolling zone area.

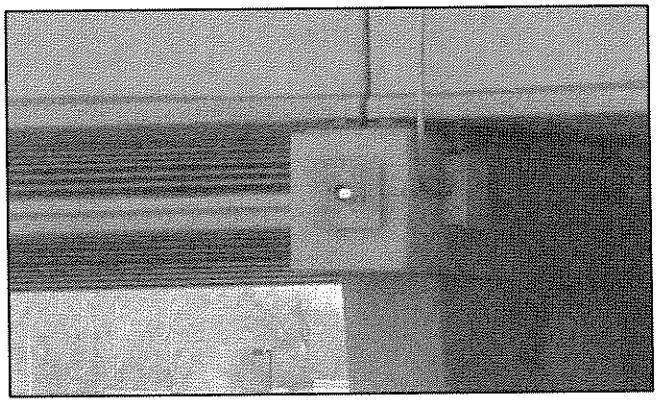


Figure 3 – Transponder Detection Beacon

Mobile Enforcement Readers - The mobile enforcement reader (MER) is a device that is installed on enforcement vehicles that allow an officer to either park anywhere on the shoulder of the road and detect the transponders that pass their vehicle or to travel adjacent to a vehicle in the Smart Lane and query whether the passing vehicles are equipped with a valid transponder. A MER would permit Smart Lane enforcement activities by CHP officers while traveling at highway speeds.

The MER will be mounted on the patrol vehicles and consist of a FasTrak ETC reader, control/display unit and an antenna. The ETC reader and antenna units will be FasTrak compliant devices which operate at 915 MHz frequency, or whichever Title-21 ETC standard is currently in place coincident with commissioning of the Smart Lane system. The onboard control/display unit will be designed to be used while safely driving the

patrol car and is typically mounted in the front seat within easy reach of the officer. A directional antenna will be mounted on the roof, or back trunk lid, of the patrol vehicle, pointing towards the left side of the vehicle. This would allow the MER to detect whether a vehicle driving alongside the enforcement vehicle is equipped with a FasTrak transponder. The MER subsystem will then compare the just identified transponder number to the tag status file list that is resident in the reader to confirm whether or not the transponder is in good standing.

Figure 4 depicts a typical scenario in which a CHP officer whose vehicle is equipped with a MER is checking to see whether the vehicle traveling in the Smart Lane is equipped with a FasTrak transponder that is in good standing.

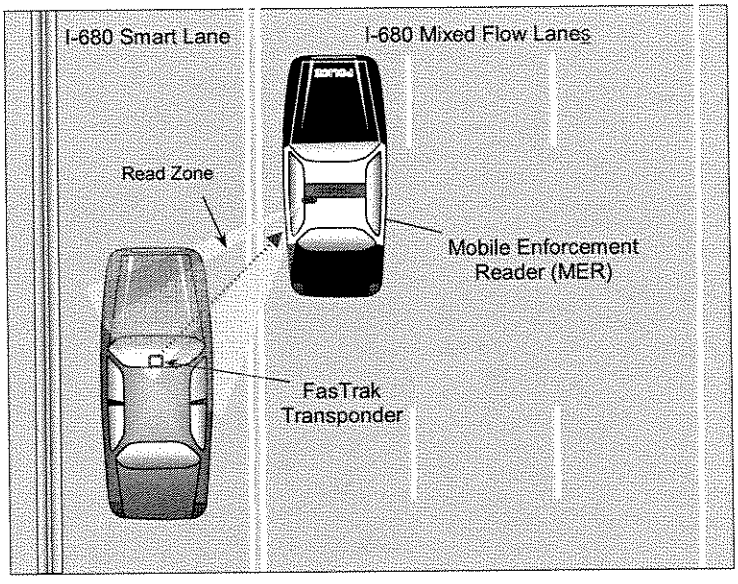


Figure 4 – Mobile Enforcement Reader Diagram

Presented below in Figure 5 is a picture of a typical MER antenna that is mounted on the emergency light rack of an enforcement vehicle.

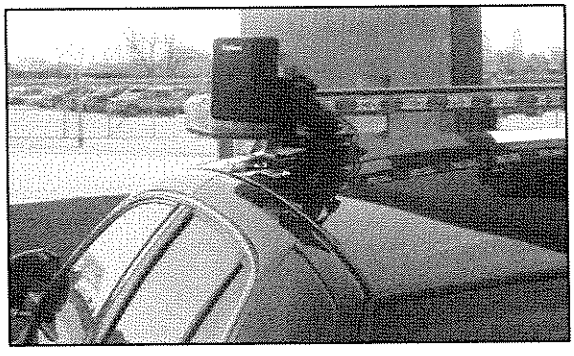


Figure 5 – Mobile Enforcement Reader Antenna

The transponder read will provide the CHP officer with the transponder number which will then be checked against the tag status file, which will be resident in the reader software, to determine whether the account that is linked to the transponder is in good standing (i.e. valid, not valid). If the information confirms that the SOV is not properly using the Smart Lane, the CHP officer can assume that the vehicle operator is a violator.

Presented below as Figure 6 is a picture of a typical on-board control/display unit, in this case a Personal Digital Assistant (PDA) device, which allows the CHP officer to initiate a transponder query read within the antenna RF scanning area. The query request can be initiated by physically touching the PDA screen, which allows the CHP officer to continue to look forward, thus creating a safe operating environment.

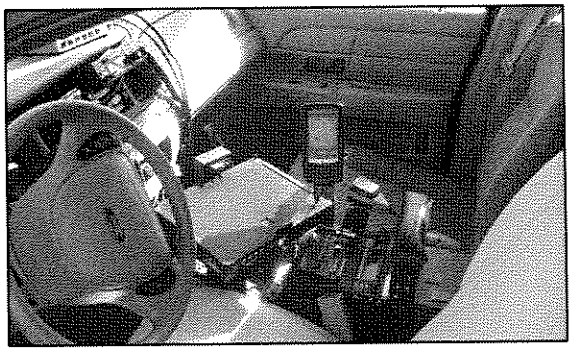


Figure 6 – On-Board Mobile Enforcement Reader Unit

Hand Held Enforcement Devices – CHP officers that are conducting Smart Lane enforcement in vehicles that are not equipped with a MER, including motorcycles, will be provided with a wireless hand held enforcement device. This device will be designed to be able to read the account number from FasTrak transponders. Once the transponder number is read, the software program that is resident on the hand held device will determine what account the transponder number is associated with. Once it is determined what the FasTrak account number is, it will be compared to the tag status file to determine whether or not the account is in good standing. New versions of the tag status file will be automatically downloaded from the Toll Data Center (TDC) to the hand held device each day at approximately 3:00 a.m. It is envisioned that an incremental file will be transmitted each day to the hand held device, not the entire valid FasTrak account list. This information will allow the CHP officer to issue a violation citation to the vehicle operator if the transponder is linked to an invalid account and there is only one person in the vehicle.

Figure 7, which is presented below, provides a very preliminary schedule of the expected I-680 Smart Lane enforcement coverage. The actual hours that will be used for Smart Lane enforcement will be adjusted through discussions between the JPA, the system

operator, and the CHP Supervisor. The following table will produce approximately 8-9 passes along the southbound Smart Lane during the peak periods with random enforcement during the off-peak periods.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday/ Holiday	Sunday/ Holiday	Total
5:00 AM								
6:00 AM	2CHP	2CHP	2CHP	2CHP	2CHP			
7:00 AM	2CHP	2CHP	2CHP	2CHP	2CHP			
8:00 AM	2CHP	2CHP	2CHP	2CHP	2CHP			
9:00 AM	2CHP	2CHP	2CHP	2CHP	2CHP			
10:00 AM	CHP	CHP	CHP	CHP	CHP			
11:00 AM						CHP	CHP	
12:00 PM						CHP	CHP	
1:00 PM						CHP	CHP	
2:00 PM								
3:00 PM								
4:00 PM	CHP	CHP	CHP	CHP	CHP	CHP	CHP	
5:00 PM	CHP	CHP	CHP	CHP	CHP	CHP	CHP	
6:00 PM	CHP	CHP	CHP	CHP	CHP	CHP	CHP	
7:00 PM								
8:00 PM								
9:00 PM								
10:00 PM								
11:00 PM								
Daily Hours	12	12	12	12	12	6	6	
Annual Total	624	624	624	624	624	312	312	3,744

Figure 7 - Smart Lane Enforcement Hours

During the first 3 to 5 weeks of Smart Lane operations, an additional 8 to 10 hours per day of enforcement may be needed to establish an enforcement presence.

Enforcement Training Plan

Training of the CHP enforcement officers will take place during a half day session. Training will cover the use of the Transponder detection beacons, the MERs and the hand held enforcement devices. Training will be provided for hands-on use of the equipment

in showing how the enforcement equipment operates while on-site, driving at highway speeds, etc.

Locations: TBD

Maximum Participants: 5

Required Equipment: Vehicles from CHP that are equipped with MER units

Curriculum and Agenda
Enforcement training would involve, as a minimum, the following courses:

Enforcement Background Training 1.0 hour
- The operation of the Smart Lane tolling system
- What is a transponder and how does it operate
- Introduction to the FasTrak tag status list and how the enforcement tools will identify the validity check of Smart Lane transponders
- Introduction to the Smart Lane system enforcement tools

Enforcement Beacon Training 0.5 hour
- Description of the enforcement beacon features and use
- Demonstration of the enforcement beacons

Mobile Enforcement Reader Training 1 hour
- Description of the MER features and use
- Utilization of the on-vehicle device (PDA) and the FasTrak tag status file
- Demonstration of the MER
- Hands-on use of the MER

Smart Lane System Enforcement Budget
The project budget for I-680 Smart Lane system enforcement will be as follows:

Item	Quantity	Unit	Unit Cost	Total Cost
Mobile Readers (1)	5	Each	$30,000	$150,000
Transponder Beacons (1)	3	Each	$5,000	$15,000
Beacon Software (1)	1	Each	$50,000	$50,000
Hand Held Devices (1)	5	Each	$20,000	$100,000
California Highway Patrol (2)	3,744	Hours	$80.00	$299,520
Vehicle/Equipment Maintenance	1	Each	$40,000	$40,000
Initial added Enforcement	50	Hours	$80.00	$4,000
Training Costs	30	Hours	$80.00	2,400
CHP Mobilization Cost (3)	1,248	Hours	$80.00	99,840
TOTAL				$760,760

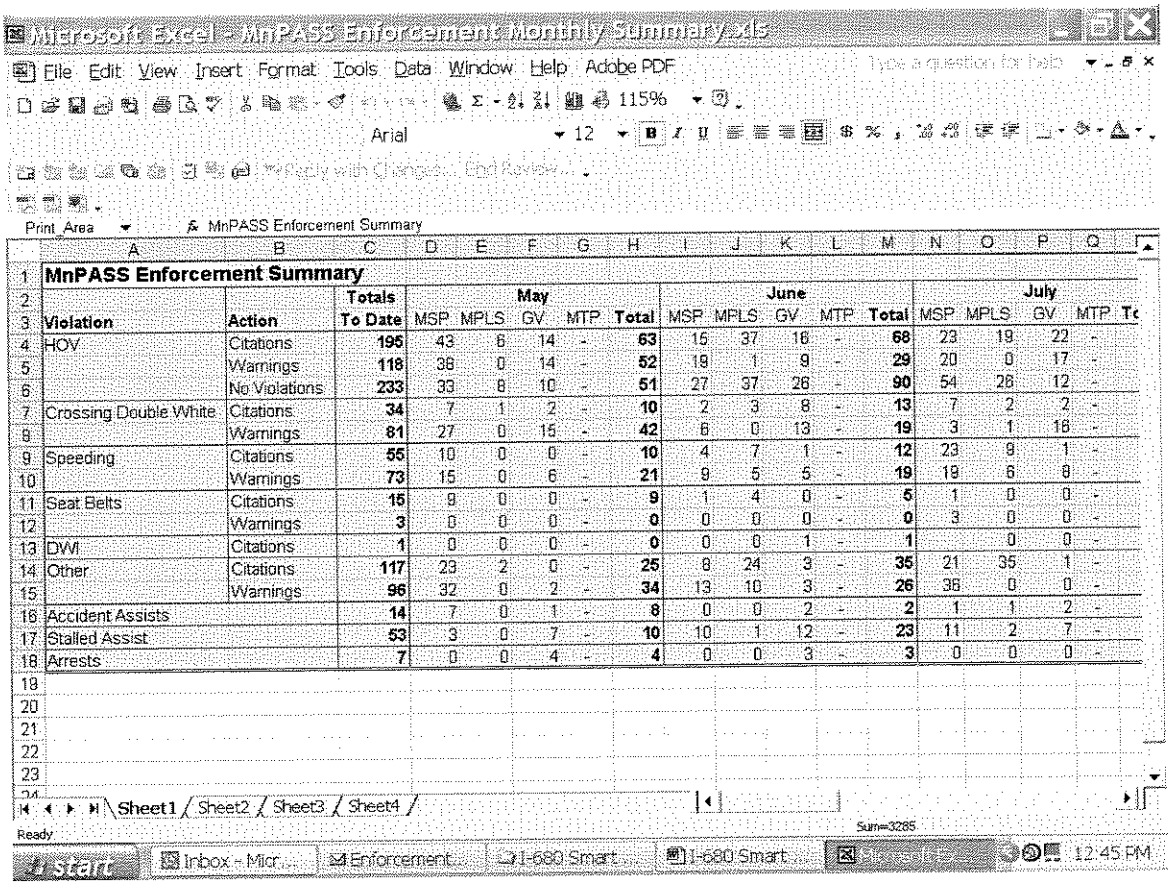
(1) Estimated.

(2) Estimate includes the CHP enforcement coverage that is presented in Figure 7.
(3) Estimated 24 hours per week.

System Enforcement Reporting
Reports will be developed from CHP officer enforcement logs indicating various information pertaining to the I-680 Smart Lane enforcement effort, including, as a minimum:

- The total number of hours of enforcement;
- At which specific locations was enforcement applied;
- How many Smart Lane violation citations were issued;
- How many warnings were issued;
- How many citations were issued to vehicle operators that crossed the double lines; and more.

The Smart Lane system enforcement reports will be included with reports from the electronic toll collection (ETS) system indicating transponder usage during the same time periods and estimated HOV usage. This will allow the JPA and CHP to properly judge how well the Smart Lane enforcement process is working. An example of a summary report is depicted below as Exhibit 8:



MnPASS Enforcement Summary

Violation	Action	Totals To Date	May MSP	May MPLS	May GV	May MTP	May Total	June MSP	June MPLS	June GV	June MTP	June Total	July MSP	July MPLS	July GV	July MTP	July Tc
HOV	Citations	195	43	6	14	-	63	15	37	16	-	68	23	19	22	-	
	Warnings	118	36	0	14	-	52	19	1	9	-	29	20	0	17	-	
	No Violations	233	33	8	10	-	51	27	37	26	-	90	54	28	12	-	
Crossing Double White	Citations	34	7	1	2	-	10	2	3	8	-	13	7	2	2	-	
	Warnings	81	27	0	15	-	42	6	0	13	-	19	3	1	16	-	
Speeding	Citations	55	10	0	0	-	10	4	7	1	-	12	23	9	1	-	
	Warnings	73	15	0	6	-	21	9	5	5	-	19	19	6	8	-	
Seat Belts	Citations	15	9	0	0	-	9	1	4	0	-	5	1	0	0	-	
	Warnings	3	0	0	0	-	0	0	0	0	-	0	3	0	0	-	
DWI	Citations	1	0	0	0	-	0	0	0	1	-	1		0	0	-	
Other	Citations	117	23	2	0	-	25	8	24	3	-	35	21	35	1	-	
	Warnings	96	32	0	2	-	34	13	10	3	-	26	36	0	0	-	
Accident Assists		14	7	0	1	-	8	0	0	2	-	2	1	1	2	-	
Stalled Assist		53	3	0	7	-	10	10	1	12	-	23	11	2	7	-	
Arrests		7	0	0	4	-	4	0	0	3	-	3	0	0	0	-	

Figure 8 – Enforcement Summary

Conclusion

The enforcement plan outlined in this document maximizes the resources available for this pilot project. Enforcement efforts could be increased by adding more enforcement hours and equipment, if deemed necessary by the JPA. This will be considered after operations begin and a determination is made as to the effectiveness of the enforcement plan that is outlined herein.

The plan will be successful if the level of complaints from those using the Smart Lane properly does not indicate an atmosphere of unfairness and the traffic in the lanes can be properly managed by the dynamic adjustment of tolls.